

# Aquatic Nuisance Species (AIS) Early Detection and Rapid Response at NERRS Sites

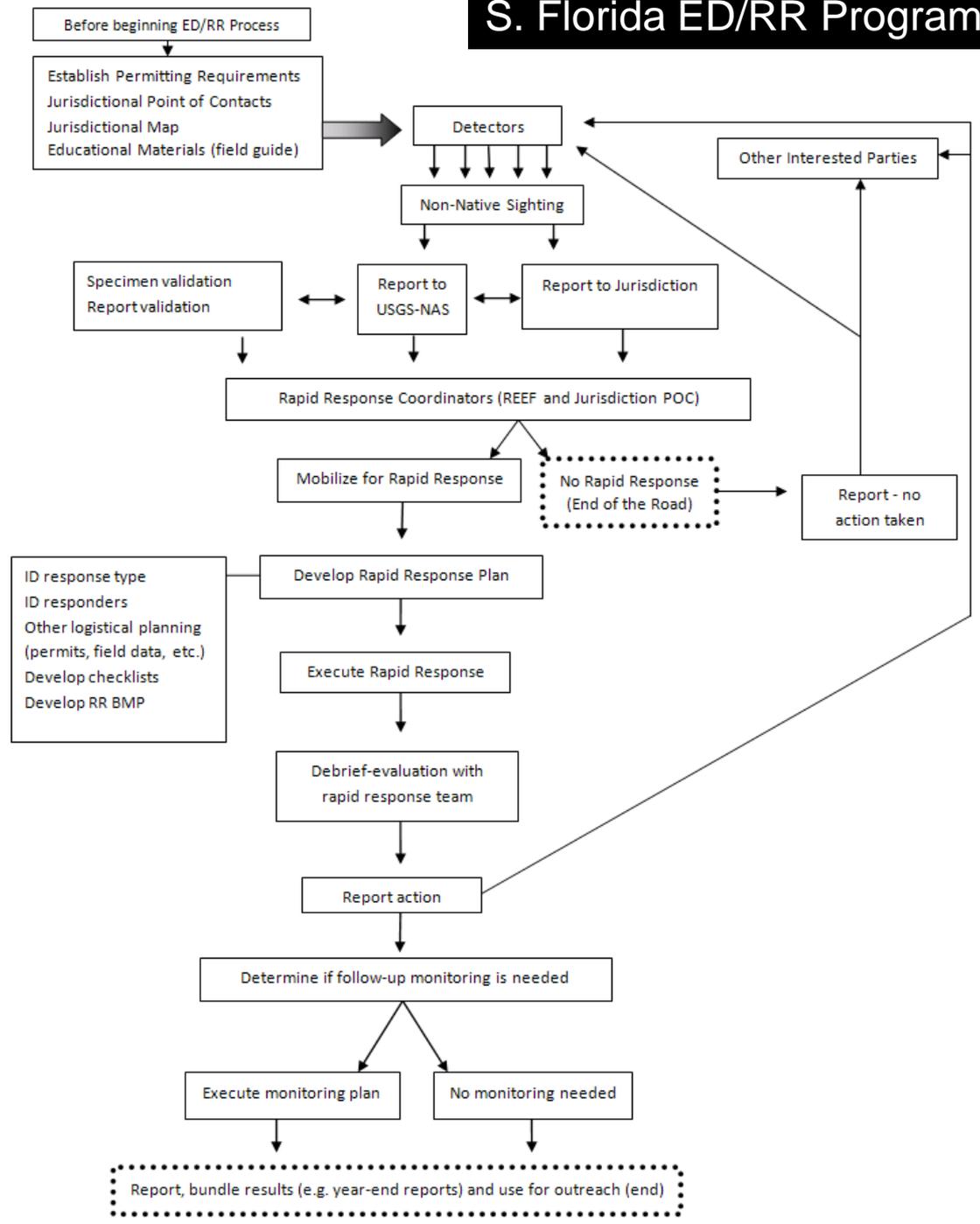
James Morris, NOAA/NOS/NCCOS

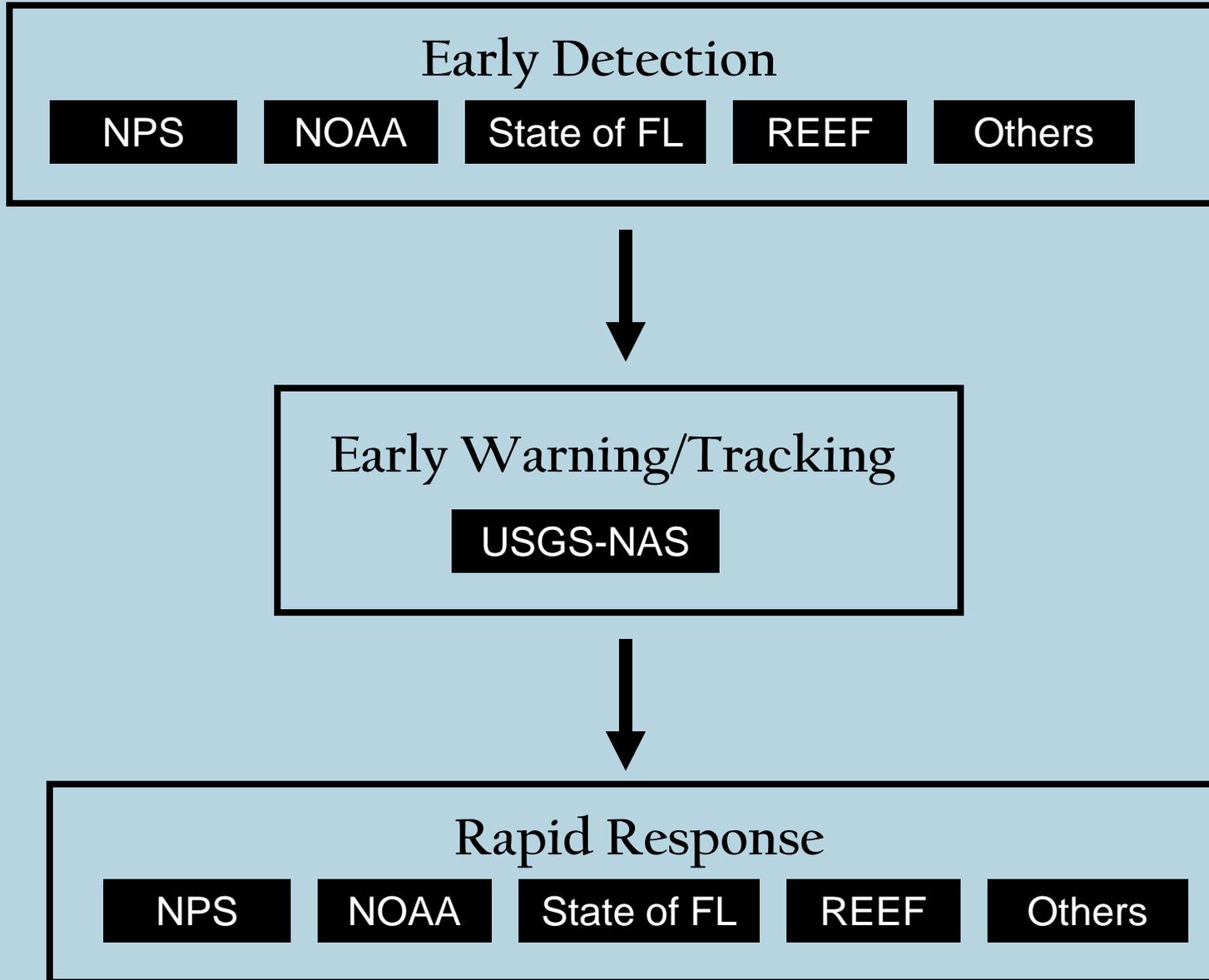


Invasives can get ugly!



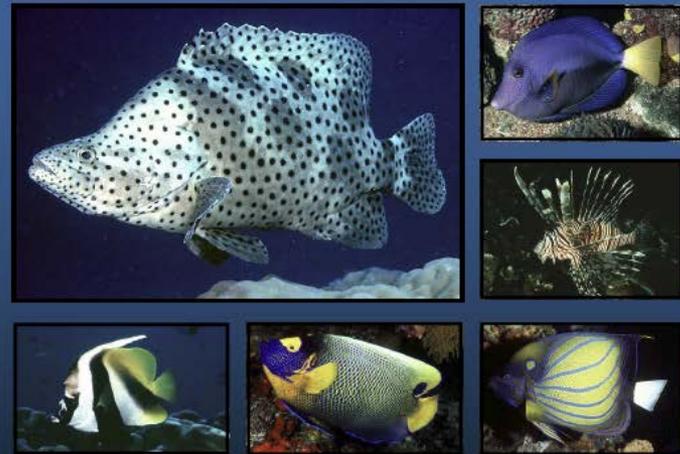
# S. Florida ED/RR Program





**Local field guides can be very useful!**

## Field Guide to the Nonindigenous Marine Fishes of Florida



Schofield, P. J., J. A. Morris, Jr. and L. Akins



# The case for a NERRS AIS Monitoring Program

**Not a new  
 idea for  
 NERRS**

The screenshot shows the website for the National Estuarine Research Reserve System. The main navigation bar includes: Background, Research, Fellowships, Education, Training, Stewardship, News & Calendar, and NERRS Reserves. The current page is titled 'STEWARDSHIP' and features a sub-header 'CHANGES IN BIOLOGICAL COMMUNITIES'. The main content area is titled 'Invasive Species' and contains a paragraph explaining that invasive species are not native to an ecosystem and can harm the environment, public health, and the coastal economy. Below this is a 'Stewardship Stories' section with a bulleted list of projects: Prudence Island Cooperative Weed Management Area (Narragansett Bay NERR, RI), Spartina Survey and Control (Padilla Bay NERR, WA), The Effect of Australian Pine Removal on Sea Turtle Nesting Patterns (Keewaydin Island, Florida, Rookery Bay NERR, FL), and Swift Tract Invasives Removal Project (Weeks Bay NERR, AL). A table titled 'Prudence Island Cooperative Weed Management Area' provides details on the subject, reserves, time period, partners, and primary issues. A right-hand sidebar contains a 'Reserve Stewardship' dropdown menu with options for ACE Basin, SC; Apalachicola, FL; Chesapeake Bay, MD; Chesapeake Bay, VA; Delaware; and Elkhorn Slough, CA. Other sidebar items include Ecological Changes, Water Quality, Habitat Alteration, Habitat Mapping and Change, Restoration Science, Land Acquisition, and Publications. Contact information for Nina Garfield is provided at the bottom of the sidebar.

Home / Site Map / Contact

Search

Background Research Fellowships Education Training **Stewardship** News & Calendar NERRS Reserves

Home > Stewardship

**STEWARDSHIP**

CHANGES IN BIOLOGICAL COMMUNITIES

**Invasive Species**

Invasive species are species not native to an ecosystem, and whose introduction to that ecosystem can harm the environment, public health or welfare. Invasive species may constitute the largest single threat to our coastal ecosystem, our coastal economy, and human health in the coastal region. Invasive species often out-compete native species including species of special concern. All four coasts—East, West, Gulf, and Great Lakes—and the majority of the interior of this country have been severely impacted by aquatic invasive species.

**Stewardship Stories**

- [Prudence Island Cooperative Weed Management Area](#), Narragansett Bay NERR, RI
- [Spartina Survey and Control](#), Padilla Bay NERR, WA
- [The Effect of Australian Pine Removal on Sea Turtle Nesting Patterns, Keewaydin Island, Florida](#), Rookery Bay NERR, FL
- [Swift Tract Invasives Removal Project](#), Weeks Bay NERR, AL

**Prudence Island Cooperative Weed Management Area**

Subject	Story
Reserves:	Narragansett Bay Reserve, RI
Time Period:	May 2007 - ongoing
Partners:	Prudence Conservancy, Audubon Society of Rhode Island, Prudence Improvement Association, Town of Portsmouth Dept. of Public Works, Prudence Island Utility Corporation, private landowners
Primary Issues:	Invasive Species

▶ Reserve Stewardship

- ▶ ACE Basin, SC
- ▶ Apalachicola, FL
- ▶ Chesapeake Bay, MD
- ▶ Chesapeake Bay, VA
- ▶ Delaware
- ▶ Elkhorn Slough, CA

▶ Ecological Changes >

▶ Water Quality >

▶ Habitat Alteration >

▶ Habitat Mapping and Change >

▶ Restoration Science >

▶ Land Acquisition >

▶ Publications >

For more information contact

▶ [Nina.Garfield@noaa.gov](mailto:Nina.Garfield@noaa.gov)

# The case for a NERRS AIS Monitoring Program

- The NERRS sites are well positioned geographically
- NERRS missions are research, education, and stewardship
- Some local (volunteer) resources for ED/RR
- Can integrate climate change





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 Contact USGS  
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## NAS - Nonindigenous Aquatic Species

<a href="#">NAS Program Home</a>	<a href="#">News</a>	<a href="#">Alert System</a>	<a href="#">Database &amp; Queries</a>	<a href="#">General Taxa Information</a>	<a href="#">Links to Other Resources</a>
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Welcome to the **Nonindigenous Aquatic Species (NAS)** information resource for the United States Geological Survey. Located at the Center for Aquatic Resource Studies, this site has been established as a central repository for accurate and spatially referenced biogeographic accounts of nonindigenous aquatic species.

Through the links below you can obtain information, maps, or issue queries to the NAS database regarding different nonindigenous aquatic species.

### Vertebrates



Amphibians



Reptiles



Fishes



Mammals

### Invertebrates



Tunicates



Bryozoans



Sponges



Coelenterates



Annelids



Mollusks



Crustaceans



## Gulf & South Atlantic Regional Panel On Aquatic Invasive Species



- Home
- Meetings
- Panel Members
- Publications and Related Materials
- A National Response: Federal Legislation and Programs
- Related Sites
- Contact Us
- The North America Brown Tree Snake Control Team



The spread of exotic or non-native species through intentional or inadvertent transport by man has become an extremely serious threat to native plants and animals worldwide. Negative economic effects of invasions or introductions of non-native species in the US alone were estimated at 97 billion dollars in 1991. That figure continues to rise as our understanding of the crisis is more fully understood. An effective, coordinated response to address the effects of such invasions is urgently needed and must be based on detailed knowledge of the biology and behavior of these species. This web site is intended to address this urgent need.

- It provides a Gulf-wide inventory of biological data on non-native species, including fishes and invertebrates.
- It also addresses microorganisms with disease potential within the Gulf of Mexico and near-coastal habitats.

The longer term goal of the website is to improve tracking of the effects of non-native species. The web-site is designed to permit data and information to be shared between the GSMFC non-native species site, the USGS Aquatic Species database, and other sites with which agreements have been made.

[What is an Invasive Species?](#)

- ★ Bookmark/Favorites
- ✉ E-Mail Link

100<sup>th</sup> Meridian Initiative



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Habitatitude  
 PROTECT OUR ENVIRONMENT  
 DON'T FEED THE AQUATIC MARKET

SOUTHEAST AQUATIC RESOURCES PARTNERSHIP





## Discussion topics:

- What is happening regionally?
- Is there interest in more coordination?
  - NEERS Regional AIS database
- Are there invasive species plans for each site?
- Are rapid assessments ongoing?
- What is possible with existing and future resources?
- What type of program has been proposed in the past?
- What is the funding level is needed?